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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ALIE, GHASSEM

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,196

Applicant(s)

SHTEYNGARTS, GREGORY A.

Examiner

Ghassem Alie

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 9-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election of the invention of Group I (claims 1-8 and 26) on 04/14/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 9-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse on 04/14/05.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

a person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Forthmann (4,823,660). Regarding claim 1, Forthmann teaches a trim press including a die building up plate 36 that is mounted to a first platen 38 and a striker plate 16 that is mounted to a second platen 12. Forthmann also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge 32 is spaced from the striker plate 16 and a cutting position in which the cutting edge 32 confronts the striker plate 16. Forthmann also teaches a die 30 for cutting a thermoformed plastic article from a sheet 2 of thermoformable plastic. Forthmann also teaches that the die includes a knife element 30 connected to the die build up plate 36 that has a cutting edge 32 for serving the thermoformable plastic sheet when the knife element 30 confronts the striker plate 16.

Forthmann also teaches a heater 170, 36 is in direct contact with knife element 30 for heating the knife element. Heater 170 and plate 36 define a heating element, since these two components are heated and the heat is transferred to knife 30 through these components. In addition, the heater 170 and the plate 36 form a heating element that heats up the blade. Therefore, these two components are defined as a heater element. See Figs. 1-3 and 4-8 and col. 3, lines 30-68 and col. 4, lines 1-68 in Forthmann.

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Harcuba et al. (4,051,754), hereinafter Harcuba. Regarding claim 1, Harcuba teaches a trim press including a die building up plate 14 that is mounted to a first platen 4 and a striker plate 6 that is inherently mounted to second platen. The plate 6 inherently is supported or mounted to a surface or a platen that is considered to be a second platen. Harcuba also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge is spaced from the striker plate 6 and a cutting position in which the cutting edge confronts the striker plate 6. Harcuba also teaches a die capable of cutting a thermoformed plastic article from a sheet of thermoformable plastic. Harcuba also teaches that the die includes a knife element 2, 3 connected to the die build up plate 1 that has a cutting edge for serving the thermoformable plastic sheet when the knife element 2, 3 confronts the striker plate 6. Harcuba also teaches a heater 1, 7 in contact with knife element 2, 3 for heating the knife element. Heater 7 and plate 1 define a heating element, since these two components are heated and the heat is transferred to knife 2, 3 through these components. In addition, the heater 7 and the plate 1 form a heating element that heats up the knife. See Figs. 1-2 and col. 1, lines 56-68 and col. 2, lines 1-65 in Harcuba.

Regarding claim 3, Harcuba teaches everything noted above including a thermocouple 17 for measuring a temperature of the knife element and a temperature control module for controlling the heater based on the measured temperature to maintain the knife element 2, 3 within a range of desired temperature. See Fig. 1 and col. 2, lines 11-25. The thermostat 17 functions the same as the thermocouple and measures and regulates the temperature between the blade and the heater 7.

6. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Joep et al. (3,640,666), hereinafter Joep. Regarding claim 1, Joep teaches a trim press 10 including a die building up plate 32 that is mounted to a first platen 36 and a striker plate that is mounted to a second platen 12. The striker plate is defined by the plate with molding 13 attached to the plate 12. Joep also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge is spaced from the striker plate and a cutting position in which the cutting edge confronts the striker plate. Joep also teaches a die for cutting a thermoformed plastic article from a sheet 11 of thermoformable plastic. Joep also teaches that the die includes a knife element 16 connected to the die build up plate 32 that has a cutting edge for serving the thermoformable plastic sheet when the knife element 16 confronts the striker plate. Joep also teaches a heater element 34 is in direct contact with knife element 16 for heating the knife element. Knife 16 is mounted to the heater element 34 via the baffle plate 32 which is in direct contact with the heating element 34. The baffle plate is considered to be part of the knife assembly. It should also be noted that entire plate 34 is called "heated plate means." Blade 16 is mounted to the

heated plate means 14. Therefore, the knife is in direct contact with the heater element. See Figs. 1-5 and col. 3, lines 31-75 and col. 4, lines 1-72 in Joep.

Regarding claim 4, Joep teaches a die travel stop 22, 24 mounted to the die buildup plate 32 that limits travel of the trim press by engaging a feature 40, 38 on the striker plate when the trim press moves beyond the cutting position. See Figs. 1-5 in Joep.

Regarding claim 5, Joep teaches everything noted above including that the die travel stop includes a post element 22, 24 that is mounted on the die build up plate 32 that limits travel of the trim press to no further than a position at which the cutting edge first contacts the striker plate. See Figs. 1-4 Joep.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

To the degree that it could be argued that the heating element is not directly in contact with the knife in Forthmann or in Harcuba the rejection below is applied.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forthmann in view of Davis et al. (2002/0174947), hereinafter Davis, or Olson (3,587,377). Regarding claim 1, Forthmann teaches a trim press including a die building up plate 36 that is mounted to the first platen 38 and a striker plate 16 that is mounted to a second platen 12. Forthmann also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge 32 is spaced from the striker

plate 16 and a cutting position in which the cutting edge 32 confronts the striker plate 16.

Forthmann also teaches a die 30 for cutting a thermoformed plastic article from a sheet 2 of thermoformable plastic. Forthmann also teaches that the die includes a knife element 30 connected to the die build up plate 36 that has a cutting edge 32 for serving the thermoformable plastic sheet when the knife element 30 confronts the striker plate 16.

Forthmann also teaches a heater 170 in contact with knife element 30 for heating the knife element. See Figs. 1-3 and 4-8 and col. 3, lines 30-68 and col. 4, lines 1-68 in Forthmann.

Forthmann does not expressly teach that the heater element is in direct contact with the knife. However the use of a heating element in direct contact with the knife is well known in the art such as taught by Davis or Olsen. Davis teaches a heating element 75 in direct contact with a knife 71 of a die 72. See Fig. 1 and col. 3, paragraphs 29-32 in Davis. Olsen also teaches a heating element 30, 32 in direct contact with a knife 10 of a die. See Fig. 1 and col.

4, lines 25-40 in Olsen. It would have been obvious to a person of ordinary skill in the art to provide a direct contact between the heating element and the knife in Forthman's trim press apparatus, as taught by Davis or Olsen, in order to heat up the knife in shorter period of time.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harcuba in view of Davis or Olson. Regarding claim 1, Harcuba teaches a trim press including a die building up plate 1 that is mounted to the first platen 14 and a striker plate 6 that is inherently mounted to second platen. The pate 6 inherently is supported or mounted to a surface or a platen that is considered to be a second platen. Harcuba also teaches that the trim press moves one of the first or second platens such that the trim press travels between a load position in which a cutting edge is spaced from the striker plate 6 and a cutting position in

which the cutting edge confronts the striker plate 6. Harcuba also teaches a die capable of cutting a thermoformed plastic article from a sheet of thermoformable plastic. Harcuba also teaches that the die includes a knife element 2, 3 connected to the die build up plate 1 that has a cutting edge for serving the thermoformable plastic sheet when the knife element 2, 3 confronts the striker plate 6. Harcuba also teaches a heater 7 in contact with knife element 2, 3 for heating the knife element. See Figs. 1-2 and col. 1, lines 56-68 and col. 2, lines 1-65 in Harcuba. Harcuba does not expressly teach that the heater element is in direct contact with the knife. However the use of a heating element in direct contact with the knife is well known in the art such as taught by Davis or Olsen. Davis teaches a heating element 75 in direct contact with a knife 71 of a die 72. See Fig. 1 and col. 3, paragraphs 29-32 in Davis. Olsen also teaches a heating element 30, 32 in direct contact with a knife 10 of a die. See Fig. 1 and col. 4, lines 25-40 in Olsen. It would have been obvious to a person of ordinary skill in the art to provide a direct contact between the heating element and the knife in Harcuba's trim press apparatus, as taught by Davis or Olsen, in order to heat up the knife in shorter period of time.

Regarding claim 3, Harcuba teaches everything noted above including a thermocouple 17 for measuring a temperature of the knife element and a temperature control module for controlling the heater based on the measured temperature to maintain the knife element 2, 3 within a range of desired temperature. See Fig. 1 and col. 2, lines 11-25. The thermostat 17 functions the same as the thermocouple and measures and regulates the temperature between the blade and the heater 7. In addition, the use of thermocouple for measuring the temperature of the blade and a temperature control module for controlling the temperature of the heater and the knife element is well known in the art such as taught by Smith et al.

(5,451,288), hereinafter Smith. Smith teaches a thermocouple 14 connected to a knife element 25, 26 and a temperature control module 85. See Figs. 1-8 and col. 9, lines 47-65 in Smith.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forthmann or Harcuba in view of Obara (JP405154795A). Regarding claim 2, Forthmann or Harcuba teaches everything noted above except that heater is adhered to the knife element about substantial portion of its perimeter. However, the use of heating element attached to a knife element is well known in the art such as taught by Obara. Obara teaches that a heater 8 is adhered to a knife element. The heater 8 is attached to the knife element 7. See Figs. 1-2 and translated abstract in Obara. The attachment of the heater to the knife element is considered to be the same as adhering the heater to the knife element, since the heater is tightly connected to the knife element. In addition, Official notice is taken that the use of adhesive to attach an element to another is well known in the art. It would have been obvious to a person of ordinary skill in the art to provide Forthmann's trim press apparatus or Harcuba's trim press apparatus with a heating element that is adhered to the knife element, as taught by Obara, in order in order to heat up the knife in shorter period of time.

10. Claims 6, 7, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over or Harcuba in view Davis, Jr. (3,802,308), hereinafter Davis, and in further view of Giovannone et al. (5,795,535), hereinafter Giovannone. Regarding claims 6 and 26, Harcuba teaches everything noted above including a die board 1 moveably mounted to the build up plate 4 that is movable within a range of positions on a plane defined by the die build up plate and wherein knife element 2, 3 is fixed to die board 1. See Fig. 1 in Harcuba. Harcuba

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does not teach a die location pilot connected to the die board that engages a registration feature associated with the plastic article such that when the trim press is in registration feature co-act with the location pilot to move the die board relative to the die build up plate such that the knife element is place in a predetermined cutting alignment with respect to the plastic article. However, Davis teaches a die location pilot 64 that is connected to a die board 60 and co-acts with a portion part of a plastic article 22 such that moves the die board relative to a die build up plate 44 such that a knife element 70 is place in a predetermined cutting alignment with respect to the plastic article 22. See Figs. 1-4 and col. 1, lines 14-63 in Davis. It would have been obvious to a person of ordinary skill in the art to provide Harcuba's die location pilot in order to hold the plastic article during the cutting operation and consequently produce clean cuts. Harcuba, as modified by Davis, does not teach that the die location pilot engages a registration feature associated with the plastic article. However, Giovannone teaches a die location pilot connected to a die board that engages a registration feature 27 associated with the plastic article 12. The die location pilot are defined by guides 40 on both sides the guide 40 in the middle. See Fig. 5A in Giovannone. The two guides 40 which are associated with cutting edges and located on both sides of the guide 40 is the middle, which is also associated with a cutting edge, are defined as a die location pilot. It would have been obvious to a person of ordinary skill in the art to provide Harcuba's trim press apparatus, as modified by Davis, with the registration of the die location pilot as taught by Givannone in order to trim multiple cuts in the plastic article and register the blades with the registrations features on the plastic article.

Regarding claim 7, Harcuba, as modified above, teaches everything noted above including that die location pilot 40 a post element that includes a generally conical recess that engages a protrusion 27 on the plastic sheet 12 to guide the knife element into the predetermined cutting position. See Fig. 5A-5B in Givoannone.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harcuba in view of Davis and Givoannone, as applied to claim 6, and in further view of Carll (2,313,801). Regarding claim 8, Harcuba, as modified above, teaches everything noted above except that the die board has a plurality of mounting holes that are oversized with respect to mounting posts on the die build up plate such that when the die board is mounted to the die build up plate the die board can slide on the die build up plate within the range defined by the oversized holes. Carll teaches a die board 16 (which is a segmented die board) having a plurality of mounting holes 26 that are oversized with respect to mounting posts on the die build up plate 50 such that when the die board 16 is mounted to the die build up plate 50 and the die board 16 can slide on the die build up plate 50 within the range defined by the oversized holes 36. See Figs. 1-3 in Carll. It would have been obvious to a person of ordinary skill in the art to provide Harcuba's trim press apparatus, as modified above, with the oversized holes on the die board as taught by Carll or Whistler in order to adjust the knife element with respect to the die build up plate.

Response to Amendment

12. Applicant's arguments with respect to claims 1-8 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Furuya et al. (6,056,531), Smith (3,833,439), Terasaka (3,982,458), Schmid et al. (3,440,909), Lemelson (3,526,694), Adachi et al. (2002/0104413), Souders (5,393,474), and Zulke et al. (3,623,209) teach a trim press apparatus.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (too-free).



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